

GASSONIC 1701 - PORTABLE TEST AND CALIBRATION UNIT

FOR THE ULTRASONIC GAS LEAK DETECTORS: GASSONIC MM0100, GASSONIC EH6028, AND GASSONIC OBSERVER

USES

- Testing and verification of the condition of the gas leak detector
- Satisfying safety check requirements for regular maintenance routines
- Calibration of the Gassonic Observer

FEATURES

- Tests the gas leak detector by simulating the noise of a gas leak through a built-in water resistant loudspeaker
- Provides a clear read-out of the current gain sensitivity of the gas leak detector
- Tests the entire sensitivity range of all ultrasonic gas leak detectors, 44-104 dB (+/- 3dB)
- Generates a constant leak noise for testing the delay function
- Satisfies EEx ib IIC T3
- Battery operated (rechargeable)
- Provides good visual and audible indication of the test status
- Ergonomic and rugged construction
- Supplied complete with all necessary accessories in a water-proof suitcase.



INTRODUCTION

The Gassonic 1701 is a portable test and calibration unit used to test and verify the functionality and condition of the Gassonic ultrasonic gas leak detectors. Besides, the Gassonic 1701 may also be used for calibration of the Gassonic Observer.

The Gassonic detectors do not require regular maintenance. However, the Gassonic 1701 can be used to satisfy the requirements of regular plant maintenance routines. Compared to traditional detection methods (Point Gas Detection and Open Path Detection) a calibration gas is not needed for testing the functionality of the detectors. The Gassonic 1701 requires no electrical connection to the gas leak detector. It is simply placed over the sensor head of the gas leak detector.

DESCRIPTION

To simulate the distinct ultrasound made by pressurised hydrocarbon gas leaks, the Gassonic 1701 generates an amplitude sweep of band limited white noise through a water resistant piezo loudspeaker. When the gas leak detector registers this noise, an optical link in the Gassonic 1701 will interact with the detector and control the test and calibration sequence. The Gassonic 1701 has three main functions.

TEST FUNCTION

The test function in the Gassonic 1701 is for regular testing of the Gassonic ultrasonic gas leak detectors. In TEST mode, the

Gassonic 1701 emits a constant calibrated sound that the ultrasonic gas leak detector responds to. On the Gassonic Observer, the sound level emitted from the Gassonic 1701 will be read out on the display of the detector, and on the Gassonic MM0100, the sound level will be read out on the Gassonic 1701.

CALIBRATION FUNCTION

Only the Gassonic Observer can be re-calibrated onsite. The Gassonic MM0100 should be shipped back to the factory for re-calibration. When calibrating the Gassonic Observer, the portable test and calibration unit will emit a series of ultrasonic sound levels at different amplitudes, and Gassonic Observer will then automatically perform a zero and a span calibration of the detector. Note that the calibration of the Gassonic Observer should only be done if the test function shows that it is outside its specifications.

DELAY TEST FUNCTION

During the delay test function, a constant sound level is emitted from the Gassonic 1701.

The purpose of the delay test function is to test the Gassonic ultrasonic gas leak detectors after they have been installed with either the built-in delay function enabled or an external delay function. The Gassonic 1701 delay test function makes it possible to verify the complete signal transmission from the detector head into the fire/gas panel or the DCS system.

GASSONIC

SPECIFICATIONS OF GASSONIC 1701

ACCURACY

+/-1dB within the sensitivity range of the
Gassonic ultrasonic gas leak detectors (44 to 104 dB).

Max. input voltage: 10V DC

Ambient charging temp. +10°C to +45°C

RECHARGEABLE BATTERY UNIT

Contents: Rechargeable NiMH battery pack

DIMENSIONS INSTRUMENT:

Height: 173mm

Width: 105mm

Depth: 115mm

Weight: 1.6 kg

BATTERY LIFE

10 hours of full operation without backlight

5 hours of full operation with backlight

Standby state: approximately 2 months

Low battery indicator in display

SUITCASE

Height: 173mm

Width: 452mm

Depth: 325mm

Weight (including Gassonic 1701 and accessories): 6.8 kg

CHARGING REQUIREMENTS

Fast charging current: 650mA for 2 hours

COMPLIANCE WITH STANDARDS

CE	CE mark indicates compliance with: EMC Directive and Low Voltage Directive.
Safety	ATEX: II2G EEx ib IIC T3 UL/ULC: Class 1 Div 1
EMC Emission	EN 50081-1 (1992) Generic emission standard. Part 1: Residential, commercial and light industry. EN 50081-2 (1993) Generic emission standard. Part 2: Industrial environment.
EMC immunity	EN 50082-1 (1997) Generic immunity standard. Part 1: Residential, commercial and light industry. EN 61000-6-2 (1999).
Temperature	Operating temperature: -15 to +50°C (+5 to 122°F). Storage temperature: -20 to +60°C (-4 to +140°F).

ORDERING INFORMATION

Portable Test and Calibration Unit: Gassonic 1701

ACCESSORIES

Water Proof Suitcase: KK 0505A

Rechargeable NiMH Battery Pack: ZZ 0001A

Battery Charger: ZG 0362A

User Guide: BB 6012

Flow Chart: BB 6030

Carrier Strap: AK 0001A

Additional/replacement accessories are available from
Gassonic upon request.

CALIBRATION

As the Gassonic 1701 is a test instrument,
it is recommended that it is tested once a year.

Calibration of Gassonic 1701: UA 1095A



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